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ABSTRACT

The extent to which occupational staffing patterns change over time was examined in a study focusing on the Food and Kindred Products industry--Standard Industrial Classification (SIC) 20. Data were taken from the 1977 and 1980 Occupational Employment Statistics program coordinated by the United States Department of Labor Statistics. Actual 1980 employment by occupation was compared to the employment expected if occupational staffing ratios had remained unchanged since 1977. Three measures were used to indicate differences between actual and simulated or expected occupational employment: absolute percentage difference, weighted absolute ratio difference, and comparison of simulated occupational employment with the 95 percent confidence interval established for the actual 1980 occupational employment. Findings indicated the average absolute percentage difference was 34.4 percent; the direction of change was correctly predicted in 51 of 100 occupations; in 21 of 85 occupations, simulated 1980 occupational employment fell within the 95 percent confidence interval; and the average weighted absolute percentage difference was 33 percent. Implications from the research for future occupational projection were the need for identification of those occupations likely to experience substantial change and the need for identification of the causes of changing occupational employment. (A six-page table is attached.) (YLB)

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Changes in Occupational Employment in the Food and Kindred Products Industry, 1977-1980

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Forward

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The present document is the first in the series of Technical Notes.

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Introduction. Projections of occupational employment are an important component in a system of occupational information used by in-school youth, the unemployed, job placement and career guidance specialists, and by educational decision-makers and administrators (2,4,12). The accuracy of projections of occupational employment hinges most critically upon projections of occupational staffing ratios (1), which indicate by industry the percentage of total employment in each of the occupational classifications pertinent to that industry. To date projections of occupational staffing ratios have largely been inaccurate because the causes of changes in the ratios are insufficiently understood.

While the eventual objective of later studies in this series will be to understand the causes of changing occupational structure within industries, the present study address a prior question: To what extent does the occupational structure of industries change over time? The study is particularly concerned with comparisons of actual occupational employment and employment to be expected if the occupational structure of an industry remained constant over time. The Food and Kindred Products industry (SIC 20) was chosen for this initial study.

Methods. Information on occupational employment in the Food and Kindred Products industry was taken from surveys of manufacturing industries conducted in 1977 and 1980. These surveys are part of a Federal-State cooperative program of Occupational Employment Statistics (OES), coordinated by the U.S. Bureau of Labor Statistics (9,10,11). Estimates of occupational employment are provided in two- and three-digit Standard Industrial Classification (SIC) industries. In the present study only data at the two-digit level will be utilized.

Changes in occupational employment in the Food and Kindred Products industry will be determined by comparing actual 1980 occupational employment with simulated 1980 occupational employment. Employment in 1980 will be simulated by assuming that occupational staffing ratios do not change from their 1977 levels. There are two reasons for making this comparison. First, the extent of the deviation of simulated occupational employment from actual occupational employment is a measure of the extent to which the occupational structure of the industry has changed over time. If there was no change in occupational structure, then simulated and actual occupational employment would be identical. Secondly, the simulation procedures used here are quite similar to the techniques used by the Bureau of Labor Statistics when making national occupational projections (2,8). In these projections, total industry employment is first estimated for the projection period and then multiplied by projected occupational staffing ratios. Many of the occupational ratios are held constant throughout the period of projection. To the extent that the occupational structure of an industry is assumed to be static, the BLS projection methods and the simulation methods used here are identical. Thus, comparison of simulated and actual 1980 occupational employment provides an estimate of the inaccuracy of projection methods where all occupational staffing ratios are assumed to remain unchanged from an earlier time period.

The following formula is used in simulating 1980 employment by occupation:

$$e'_{i,80} = (e_{i,77}/E_{77})E_{80} \qquad (1)$$

Here $e'_{i,80}$ is the simulated employment in occupation i in 1980, $e_{i,77}$ is the actual employment in occupation i in 1977, and E_j is the actual total industry employment in year j.

Three measures are used to indicate differences between actual and simulated 1980 occupational employment. One indicator is the absolute percentage difference:

$$\text{Abs. Pct. Difference} = \left| \frac{(e_{i,80} - e'_{i,80})100}{e_{i,80}} \right| \qquad (2)$$

When totaled across occupations and averaged, the result is the average absolute percentage difference.

The second measure used to indicate differences between actual and simulated 1980 occupational employment is the weighted absolute ratio difference:

$$\text{Wtd. Abs. Ratio} = w_i \left| \frac{(e_{i,80} - e'_{i,80})}{e_{i,80}} \right| \qquad (3)$$

Here w_i is the weight applied to occupation i. It is the average of actual 1977 and actual 1980 employment in that occupation. When summed across occupations, averaged by dividing by the sum of weights, and converted to a percent the result is the average weighted absolute percentage difference between actual and simulated 1980 occupational employment. This measure is particularly useful because of the importance attached to accurately estimating employment in large occupations when making projections.

The third measure used in this study compares, for each occupation, simulated occupational employment with the 95% confidence interval established for the actual 1980 occupational employment. Of interest here is the number of occupations where simulated 1980 occupational employment falls within the 95% confidence interval established for actual employment in the occupation.

After comparing actual 1980 and simulated 1980 occupational employment in the Food and Kindred Products industry, those occupations which account for the largest weighted absolute percentage differences will be identified. Of interest here is whether the errors are concentrated in only a few occupations or whether the errors are spread more evenly across a larger number of occupations. If the former situation occurs, then it is possible that by identifying key occupations in a given industry and monitoring them for changes in employment levels the accuracy of projected occupational employment could be improved.

Findings. Data from the 1977 and 1980 OES surveys of the Food and Kindred Product industry are shown in Table 1, for those occupations which were in common between the two surveys. Also shown in the Table are the results of the simulation of 1980 occupational employment. The following statements summarize the findings detailed in Table 1:

a) The average absolute percentage difference between actual and simulated 1980 occupational employment in the Food and Kindred Products industry was 34.4%.

b) The direction of change in occupational employment was correctly predicted in 51 out of the 100 occupations.

c) Of the 100 occupations listed in Table 1, information on the 95% confidence interval was available for 85 of the occupations in 1980. Of these 85, simulated 1980 occupational employment fell within the 95% confidence interval in one-quarter of the occupations (21 out of the 85).

d) The average weighted absolute percentage difference between simulated and actual 1980 occupational employment in the industry was 33.0%.

e) Those 10 occupations with the largest weighted absolute percentage differences between simulated and actual 1980 occupational employment account for nearly two-thirds (64.9%) of the total weighted absolute percentage differences.

f) In descending order of importance, the ten occupations with the largest weighted absolute percentage differences between simulated and actual 1980 occupational employment are:

- Production packager, hand or machine
- All other laborers and unskilled
- All other operatives and semi-skilled
- General office clerk
- Janitors, porters and cleaners
- Cannery workers
- Delivery and/or route worker
- Maintenance repairer, general utility
- Biological science technicians
- All other office clerical

Discussion. Over the three year period from 1977 to 1980, the Food and Kindred Products industry experienced considerable change in the structure of occupational employment. If 1980 occupational employment in the industry is estimated on the basis of 1977 occupational staffing ratios and actual 1980 total industry employment, the estimations are more inaccurate than similar projections of occupational employment performed by the BLS for the entire economy. Made in 1971, BLS projections of national occupational employment for 1980, summed across all industries, differed from actual 1980 occupational employment by 24.4% in the 64 detailed occupations where comparisons could be made (3). This compares to the 34.4% in the present simulation of 1980 occupational employment in the Food and Kindred Products industry.

The average weighted percentage difference in the 1980 BLS projections was 14.1%, indicating that larger occupations generally were more accurately projected than smaller occupations. In the present study, the average weighted absolute percentage differece between actual and simulated 1980 occupational employment was also lower than the unweighted average percentage difference, but only by a small amount (33.0% compared to 34.4%). Large occupations were only slightly more accurately projected than smaller occupations.

Other results also point to the volatility of changes in the occupational structure of the Food and Kindred Products industry, even over the relatively short span of three years. The direction of change in employment was only predicted in one-half of the occupations. In only one-quarter of the occupations did simulated 1980 occupational employment fall within the 95% confidence interval established for actual 1980 occupational employment.

It is interesting to note that the source of the errors in simulating 1980 occupational employment in the Food and Kindred Products industry, as shown in Table 1, lies wholly with inaccurate estimates of occupational staffing ratios since the 1980 total industry employment used in the simulations was the actual 1980 value. BLS projections of occupational employment must not only deal with projected occupational staffing ratios, but with projected total industry employment as well. For the BLS the two sets of projections mean a number of possible scenarios regarding the source of errors in projecting occupational employment. For example, projections of total industry employment and projections of occupational staffing ratios could both be accurate, in which case the projection of occupational employment would be accurate. Alternatively, either of the projections could be inaccurate, in which case the projections of occupational employment would be inaccurate to the degree that projections of staffing ratios or projections of total industry employment were inaccurate. Finally, both the projection of staffing ratios and the projection of total industry employment might be inaccurate, in which case the inaccuracies could reinforce each other or counteract each other.

Errors in BLS projections of 1975 occupational employment were largely inaccurate because of projection of staffing ratios (1). Similar tests of the 1980 projections could not be done, so the source of the problem is unclear in that set of projections (3). It should be noted, however, that the projection errors reported by the BLS are for the entire economy. It is likely that considerable variation in the accuracy of projection of occupational employment exists among individual industries.

The present study indicates the magnitude of the problem encountered when using static occupational ratios to project occupational employment in a single industry. Average errors are substantial and the general usefulness of the projections is questionable. However, Table 1 also provides some glimmer of hope. Ten percent of the occupations account for nearly two-thirds of the errors made in simulating 1980 occupational employment with static 1977 occupational ratios. If one had successfully predicted the employment in these occupations, the average weighted absolute percentage difference between simulated and actual 1980 occupational employment would have fallen by roughly two-thirds. This suggests that if one had been able to identify those occupations in the Food and Kindred Products industry that were likely to experience substantial changes in the number of individuals employed, then projections based upon revised staffing pattern ratios would be considerably more accurate than those based on static occupational ratios.

One is then faced with two problems: how to identify those occupations likely to experience substantial employment change and how to monitor these occupations so as to arrive at estimates of the magnitude of change in the employment in those occupations. Since the identification problem must be solved prior to the monitoring problem, discussion of the latter problem will be left for another time.

In order to identify those occupations that will experience employment change over time, it is necessary to identify the causes of changing occupational employment. What is it about the Food and Kindred Products industry, for example, that has resulted in fairly rapid change in the occupational structure of the industry? Between 1977 and 1980, the number of hand or machine production packagers decreased from 231,570 to 164,240. In 1977 13.53% of the total industry

employment was in this occupation. Only three years later the figure was down to 9.69%. Smaller but substantial decreases occurred among general office clerks; janitors, porters, and cleaners; cannery workers; delivery and/or route workers; and maintenance, repairer, and general utility workers. Increases occurred among miscellaneous laborers and the unskilled, and among miscellaneous operatives and semi-skilled workers.

There are a number of competing explanations possible for these changes in occupational employment:

a) The changes may be statistical anomalies that result from definitional or procedural changes between the two survey instruments.

b) Technological change may have occurred between the two time periods, resulting in the changes in occupational structure. For example, the large decreases in the production occupations such as cannery workers or production packagers could be the result of more extensive use of automated equipment in the industry.

c) The occupational structure of an industry is also affected when changes in the relative prices of goods and services lead to input substitutions among various types of labor or between labor and capital.

d) Changing product mix in the industry is a fourth possible source of changing occupational structure. The Food and Kindred Products industry is composed of several detailed industries: meat products, dairy products, canned and preserved fruits and vegetables, grain mill products, bakery products, sugar and confectionery products, fats and oils, beverages, and miscellaneous food preparation and kindred products. These are the three-digit SIC industries comprising the two-digit SIC Food and Kindred Products industry. If there is substantial variation in the occupational structure of these various three-digit industries, then it is possible for occupational employment at the two-digit industry level to change over time only because the product mix of the industry changes.

Consider, for example, the following hypothetical situation: Suppose there is substantial difference between the occupational structure of the meat products industry (SIC 201) and all other three-digit industries in the Food and Kindred Products industry. Assume that, in fact, these other three-digit industries all have the same occupational structure. Now assume that between 1977 and 1980 none of the occupational ratios changes at the three-digit industry level, but that the output of the meat products industry doubles while output in the other three-digit industries remains constant. The effect of this change in product mix within the Food and Kindred Products industry is that the occupational structure of the industry at the two-digit level will change over the time period, even though there was no change in occupational structure at the three-digit level.

e) Changes in industry product mix are complicated by a final factor that can be responsible for changing occupational structure. If there is a non-proportional relationship between production levels and the use of various types of labor, then the occupational structure of an industry can change whenever production levels rise or fall. For example, it may be that production workers increase or decrease in rough proportion to the level of output in the industry, but that the level of employment among managers and administrators is much more resistent to changes in production levels. In this situation, a decrease in demand for industry output would cause the occupational structure of the industry to change as production workers were laid off, but managers and administrators were not.

In conclusion, it is not easy to sort out the causes of changing occupational

employment, or to identify individual occupations in which substantial change in employment is likely to occur. One thing does seem certain, however. Occupational employment divorced from any industry identification is too aggregate for understanding the causes of changing occupational structure. Data at the two-digit industry level is better, in that one can try to understand changing occupational structure due to forces affecting the entire industry. But even this is too aggregate. One must use three-digit industry data on occupational employment and combine this with other information on purchases of capital equipment, changing output, accounts of changes in production processes or managerial procedures, and other sources of data. Through these means it may be possible to identify those occupations within an industry in which rapid employment changes are likely to occur. This in turn may lead to improved projections of occupational employment at the industry level.

Table 1: Occupational Employment in the Food and Kindred Products Industry (SIC 20): 1977, 1980 and Simulated 1980

Occupation	Employment			Comparisons of Actual and Simulated 1980			
	1977[a]	1980[b]	Sim. 1980	Absolute Pct. Diff.	Wtd. Absolute Difference	Confidence Interval[c] Low	High
Managers and officers	108,480	107,950	107,460	0.3	325	-	-
Professional occupations							
Engineers	3,470	8,970	3,440	61.6	3,832	-	-
Chemists	4,660	6,040	4,620	23.5	1,257	5,440	6,640
All other natural & math. scientists	820	2,400	810	66.3	1,067	-	-
Purchasing agent and/ or buyer	3,810	5,850	3,770	35.6	1,719	5,620	6,080
Accountants and auditors	12,690	11,040	12,570	13.9	1,649	10,380	11,700
All other prof.	4,120	11,060	4,080	63.1	4,789	-	-
Technical occupations							
Engineering techn.	1,130	2,180	1,120	48.6	809	-	-
Biological science technicians	8,000	2,830	7,920	179.9	17,525	2,490	3,170
All other science technicians	1,060	4,530	1,050	76.8	2,147	-	-
All other technicians	2,190	2,460	2,170	11.8	274	-	-
Service occupations							
Janitors, porters, and cleaners	60,320	36,390	59,750	64.2	31,044	34,930	37,850
Guards & doorkeepers	2,970	5,160	2,940	43.0	1,748	4,850	5,470
Food service workers	3,670	4,510	3,640	19.3	789	3,610	5,410
All other service	920	5,940	910	84.7	2,905	-	-

Table 1 (continued)

Occupation	Employment 1977[a]	Employment 1980[b]	Comparision of Actual and Simulated 1980 Sim. 1980	Absolute Pct. Diff.	Wtd. Absolute Difference	Confidence Interval[c] Low	High
Production, maintenance, construction, repair, material handling & powerplant occupations							
Mechanic, automotive	13,880	12,350	13,750	11.3	1,482	11,860	12,840
Mechanic, maintenance	31,280	27,840	30,990	11.3	3,340	26,730	28,950
Coin machine servicer and/or vending machine repairer	5,610	5,280	5,560	5.3	289	4,960	5,600
All other mechanics & repairers	540	7,190	530	92.6	3,579	-	-
Truck driver	46,260	40,380	45,830	13.5	5,848	38,760	42,000
Cook and/or cooker	12,190	10,290	12,080	17.4	1,956	9,470	11,110
Delivery and/or route worker	133,640	110,250	132,380	20.1	24,511	108,040	112,460
Extractor operator and/or extractor plant operator	1,520	2,510	1,510	39.8	802	2,160	2,860
Electrician	5,560	7,420	5,510	25.7	1,668	6,970	7,870
Supervisor, nonworking	61,400	48,550	60,820	25.3	13,969	46,610	50,490
Industrial truck operator	40,780	36,520	40,400	10.6	4,097	35,060	37,980
Inspector	13,660	10,200	13,530	32.6	3,889	8,980	11,420
Machinist	6,480	7,240	6,420	11.3	775	6,520	7,960
Maintenance repairer, general utility	48,040	32,130	47,590	48.1	19,281	30,840	33,420
Helper, trades	9,280	8,490	9,190	8.2	729	7,470	9,510
Mixer	35,410	23,490	35,080	49.3	14,519	22,550	24,430
Order filler	27,890	19,390	27,630	42.5	10,047	18,230	20,550
Oven operator	6,340	7,370	6,280	14.8	1,015	6,930	7,810
Production packager, hand or machine	231,570	164,240	229,390	39.7	78,568	157,670	170,810

Table 1 (continued)

Occupation	Employment 1977[a]	Employment 1980[b]	Employment Sim. 1980	Comparison of Actual and Simulated 1980: Absolute Pct. Diff.	Wtd. Absolute Difference	Confidence Interval[c] Low	High
Production, maintenance, construction, repair, material handling & powerplant occupations (continued)							
Stationary boiler firer	1,360	2,640	1,350	48.9	978	2,430	2,850
Stationary engineer	1,080	2,670	1,070	59.9	1,123	2,460	2,880
Drier operator	5,380	3,910	5,330	36.3	1,686	3,520	4,300
Baker	8,010	8,990	7,930	11.8	1,003	7,910	10,070
Baker helper	16,340	15,230	16,190	6.3	994	13,710	16,750
Boner, meat	16,230	12,510	16,080	28.5	4,065	10,900	13,400
Boner, poultry	9,890	11,500	9,800	14.8	1,583	9,430	13,570
Butcher, all-around	21,510	21,550	21,310	1.1	237	18,960	24,140
Candy-maker	2,430	3,260	2,410	26.1	743	2,740	3,780
Carcass splitter	6,440	4,800	6,380	32.9	1,849	4,130	5,470
Casing finisher and/or stuffer	6,840	4,440	6,780	52.7	2,972	3,730	5,150
Cheesemaker	2,640	2,770	2,620	5.4	146	2,490	3,050
Cheesemaker helper	6,100	5,680	6,040	6.3	371	5,000	6,360
Chicken cutter	13,150	12,600	13,030	3.4	438	10,580	14,620
Cooler room worker, meat	8,520	6,960	8,440	21.3	1,649	6,120	7,800
Dairy processing equipment operator	11,040	11,500	10,940	4.9	552	10,810	12,190
Dividing machine operator and/or dough brake machine operator	4,830	4,900	4,780	2.4	117	4,510	5,290
Feed pellet mill operator	2,610	3,140	2,590	17.5	503	2,760	3,520
Flavor room operator and/or freezer operator	3,070	2,780	3,040	9.4	275	2,500	3,060
Ingredient scaler	1,990	2,310	1,970	14.7	316	2,080	2,540

Table 1 (continued)

Occupation	Employment 1977[a]	Employment 1980[b]	Employment Sim. 1980	Comparison of Actual and Simulated 1980 Absolute Pct. Diff.	Wtd. Absolute Difference	Confidence Interval[c] Low	High
Production, maintenance, construction, repair, material handling & powerplant occupations (continued)							
Meat grinder	3,500	4,190	3,470	17.2	661	3,690	4,690
Miller	6,140	4,840	6,080	25.6	1,405	4,360	5,320
Novelty worker	3,860	1,740	3,820	119.5	3,346	1,430	2,050
Poultry dresser and/or eviscerator	56,540	50,330	56,010	11.3	6,038	48,320	52,340
Pumper	1,650	1,480	1,630	10.1	158	1,240	1,720
Raw cheese worker	1,730	2,790	1,710	38.7	875	2,060	3,520
Retort operator	1,560	1,300	1,550	19.2	275	1,140	1,460
Shellfish processing machine tender	1,120	1,920	1,110	42.2	641	1,310	2,530
Shellfish shucker	4,960	5,260	4,910	6.7	342	4,200	6,520
Skin peeling machine operator	1,290	1,010	1,280	26.7	307	850	1,170
Skinner, animal	5,460	4,610	5,410	17.4	876	3,960	5,260
Smoker	2,130	1,850	2,110	14.1	281	1,590	2,110
Stunner	1,380	1,140	1,370	20.2	255	1,000	1,280
Sugar boiler	1,500	920	1,490	62.0	750	770	1,070
Tester	8,970	10,170	8,890	12.6	1,206	9,560	10,780
Cutting machine operator, food	11,770	8,680	11,660	34.3	3,507	7,990	9,370
Farm equipment operator	3,540	4,150	3,510	15.4	592	3,320	4,980
Fish cleaner, hand and/or fish butcher	8,800	6,830	8,720	27.7	2,165	5,600	8,060
Fermentation operator	1,570	1,760	1,560	11.4	190	1,410	2,110
Cannery worker	79,330	56,420	78,580	39.3	26,675	53,030	59,810
Food shaper, hand	4,490	3,450	4,450	29.0	1,151	2,830	4,070
Depositor, food	5,090	3,100	5,040	62.6	2,563	2,600	3,600
Pickler, food	1,760	1,190	1,740	46.2	681	900	1,480

Table 1 (continued)

Occupation	Employment 1977[a]	Employment 1980[b]	Comparison of Actual and Simulated 1980 Sim. 1980	Absolute Pct. Diff.	Wtd. Absolute Difference	Confidence Interval[c] Low	High
Production, maintenance, construction, repair, material handling & powerplant operations (continued)							
Washer and/or separator, food	13,530	9,210	13,430	45.8	5,207	7,740	10,680
Grader, food and/or skins	6,510	7,310	6,450	11.8	1,134	6,140	8,480
Equipment cleaner, hand	5,080	20,980	5,030	76.0	9,903	19,720	22,240
All other skilled craft and kindred	6,820	22,050	6,760	69.3	10,003	-	-
All other operatives and semi-skilled	38,720	98,370	38,360	61.0	41,812	-	-
All other laborers and unskilled	89,660	178,760	88,820	50.3	67,508	-	-
Clerical occupations							
Computer operator	1,240	3,640	1,230	66.2	1,615	3,490	3,790
Keypunch operator	2,040	4,410	2,020	54.2	1,748	4,140	4,680
All other office machine operators	980	3,300	970	70.6	1,511	-	-
Accounting clerk	22,070	16,120	21,860	35.6	6,798	15,470	16,770
Bookkeeper, hand	8,930	8,740	8,850	1.3	115	8,390	9,090
General office clerk	47,220	22,700	46,780	106.1	37,093	21,790	23,610
Order clerk	3,300	5,540	3,270	41.0	1,812	5,210	5,870
Secretary	22,820	20,230	22,610	11.8	2,540	19,020	21,440
Typist	1,460	3,240	1,450	55.2	1,297	2,980	3,500
All other office clerical	4,940	30,080	4,890	83.7	14,656	-	-
Shipping packer	25,490	20,580	25,250	22.7	5,229	18,930	22,230
Shipping and/or receiving clerk	17,330	13,110	17,170	31.0	4,718	12,590	13,630
Weigher, recordkeeping	2,020	2,620	2,000	23.7	550	2,360	2,880

Table 1 (continued)

Occupation	Employment 1977[a]	Employment 1980[b]	Employment Sim. 1980	Comparison of Actual and Simulated 1980: Absolute Pct. Diff.	Wtd. Absolute Difference	Confidence Interval[c] Low	Confidence Interval[c] High
Clerical occupations (continued)							
Stock clerk, stock-room, warehouse or storage yard	9,210	9,130	9,120	0.1	9	8,580	9,680
All other plant clerical	1,420	6,290	1,410	77.6	2,991	-	-
Sales occupations							
Sales agent, associate, and/or representative	42,760	44,950	42,360	5.8	2,544	43,150	46,750
Sales clerk	20,120	21,960	19,930	9.2	1,936	20,640	23,280
TOTALS	1,710,910	1,694,830	-	3436.0	561,482	-	-
AVERAGES	-	-	-	34.4	33.0	-	-

[a]Source: U.S. Department of Labor, Bureau of Labor Statistics. Occupational Employment in Manufacturing Industries, 1977, Bulletin 2057. Washington, D.C.: U.S. Government Printing Office, 1980.

[b]Source: U.S. Department of Labor, Bureau of Labor Statistics. Occupational Employment in Manufacturing Industries, Bulletin 2133. Washington, D.C.: U.S. Government Printing Office, 1982.

[c]This is reported at the 95% level. If 100 samples had been taken, only 5% of the samples would have provided estimates of occupational employment outside the range reported in the table.

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